

## **CLAIMS**

What is claimed is:

1. A color wheel comprising:

a carrier element, which has a central bearing, a first carrier, and a second carrier, and rotates around the central bearing, the first carrier having at least a first aperture;

a filter group, which has a transparent zone and a filter bonding zone, the filter group and the carrier element sharing the central bearing and the filter bonding zone having at least a second aperture; and

at least one connection component, which is simultaneously mounted in the first aperture and the second aperture to fix the filter bonding zone of the filter group between the first carrier and the second carrier.

2. The color wheel of claim 1, wherein the transparent zone protrudes from the edge of the carrier element.

3. The color wheel of claim 1, wherein the connection component includes an adhesive component.

4. The color wheel of claim 1, wherein the second aperture does not penetrate through the filter group.

5. The color wheel of claim 1, wherein the first aperture corresponds to the second aperture.

6. The color wheel of claim 1, wherein the opening of the second aperture is selected from the group comprising groove-like and cave-like shapes and the second aperture surrounds the central bearing.

7. The color wheel of claim 6, wherein the filter group comprises at least one

filter.

8. The color wheel of claim 1, wherein the second aperture penetrates through the filter group.

9. The color wheel of claim 8, wherein the second carrier further comprises at least a third aperture corresponding to the second aperture.

10. The color wheel of claim 9, wherein the connection component is simultaneously mounted in the first aperture, the second aperture, and the third aperture to fix the filter bonding zone of the filter group between the first carrier and the second carrier.

11. The color wheel of claim 1, wherein the filter group further comprises at least a fourth aperture and the fourth aperture and the second aperture are located on corresponding opposite surfaces.

12. The color wheel of claim 11, wherein the second carrier further comprises at least a fifth aperture corresponding to the fourth aperture.

13. The color wheel of claim 12, wherein the connection component is simultaneously mounted in the first aperture, the second aperture, the fourth aperture, and the fifth aperture to fix the filter bonding zone of the filter group between the first carrier and the second carrier.

14. The color wheel of claim 1, wherein the opening of the first aperture is selected from the group comprising groove-like and cave-like shapes.

15. The color wheel of claim 1, wherein the material of the connection component is a soft gel.

16. The color wheel of claim 1, wherein the material of the connection component is an elastic gel.

17. A method for making a color wheel, which comprises the steps of:

forming at least a first aperture in a filter bonding zone of a filter group; forming at least a second aperture on a first carrier of a carrier element; and connecting a connection component to the first aperture and the second aperture to fix the filter group onto the carrier element.

18. The method of claim 17 further comprising the step of holding the filter group using the first carrier and a second carrier of the carrier element.

19. The method of claim 18, wherein the connection component is connected to the filter group, the first carrier and the second carrier simultaneously.

20. A filter comprising:

a transparent zone, which surrounds a central bearing; and  
a bonding zone, which surrounds the central bearing and whose first surface has at least a first aperture;  
wherein the transparent zone surrounds around the outer side of the bonding zone with the central bearing as its center.